

ABSTRACT**Agile PRT Deconvolution method and systems, and its uses**

This invention relates to radar signal processing. In particular, this invention concerns signal processing of agile Pulse Repetition Time (PRT) sampled signal transmitted using spread spectrum technique. This invention solves, in particular, the incompatibility between Doppler processing and spread spectrum such providing an improved anti-jamming technique without narrowing the Doppler range. The method for deconvolution comprises combining the pulses with the same carrier in a burst, transforming the obtained signals from time to frequency domain, and deconvolving the obtained spectra. In a first embodiment of this invention, such a deconvolution method is adapted to irregular PRT sampled signal comprises an irregular samples to regular zero-padded samples conversion step between the combination and the transformation steps.